



ECONOMIC STABILITY AND NUTRITIONAL CHOICES: A COMPARATIVE STUDY OF FOOD EXPENDITURE AND DIETARY QUALITY ACROSS DEVELOPMENT LEVELS

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ABSTRACT

Food is essential to human well-being, as it provides the nourishment that ensures a longer, healthier lifespan. As food habits are ever-evolving and economic instability is rising, it is vital to critically analyze the intersection between wealth, health, and societal development. This research investigates the relationship between economic conditions and nutritional choices by analyzing the proportion of household income spent on food and the macronutrient composition of diets in developed, developing, and underdeveloped countries, aiming to understand how economic stability impacts dietary quality and overall health outcomes. It aims to elucidate the intricate dynamics between economic conditions and nutritional choices.

KEYWORDS: Household Income, Macronutrient Composition, Dietary Quality, Health, Economic Stability, Nutritional Choice, Economic Well-Being

INTRODUCTION

Economic and nutritional relationships provide insight into the interactions between wealth, health, and societal well-being. Globally, economic factors have a significant impact on dietary choices and nutritional outcomes. The higher incomes of developed countries like the United States allow for a smaller percentage of household income to be spent on food. Yet, this economic advantage does not guarantee better health outcomes, as evidenced by the high rates of obesity linked to dietary habits. Poor health in terms of obesity is not an affliction reserved for developed countries; a growing prevalence of obesity and undernutrition are also challenges in developing countries such as India, where a greater proportion of income is allocated to food due to economic constraints. This disparity underscores the complex impact of economic status on nutritional quality and health disparities within societies.

LITERATURE REVIEW

The study on economics, nutrition, and health outcomes demonstrates a complex link influenced by disparities in socioeconomic status and dietary shifts in many worldwide contexts. Developed nations often have lower amounts of household income dedicated to food expenditure, indicating economic stability and diverse consumption habits beyond fundamental requirements. In contrast, developing countries devote a greater proportion of their income to food, highlighting economic constraints that frequently result in limited access to healthy meals and a higher prevalence of undernutrition among vulnerable people (Smith, 2019; FAO, 2018).

Conversely, greater economic affluence in industrialized nations is associated with increased consumption of energy-dense, processed foods, which contributes to the incidence of obesity and diet-related noncommunicable diseases (NCDs). This dietary change highlights the complicated interplay

between income, lifestyle choices, and health consequences, in which economic

This dietary change highlights the complicated interplay between disposable income, lifestyle choices, and health outcomes, in which economic luxury does not always translate into greater nutritional health. Addressing these concerns requires customized policy initiatives that promote better food environments, increase nutritional knowledge, and reduce socioeconomic gaps to improve general population health (Popkin, 2017; Darmon & Drewnowski, 2008). Future research should focus on successful solutions that combine economic development and public health activities to create equal health outcomes throughout the world.

METHODOLOGY

This research employs a mixed-method approach, combining quantitative and qualitative secondary data to explore the relationship between economic stability and nutritional choices. Quantitative data, sourced from government databases and peer-reviewed studies, includes household income, food expenditure, and macronutrient composition for the United States (developed), India (developing), and Myanmar (least developed). Descriptive statistics analyze income spent on food, revealing consumer behavior patterns across economic contexts. Qualitative data, gathered from literature reviews and policy papers, provides context to the quantitative findings, exploring the socioeconomic factors influencing dietary choices. This mixed-method approach is justified as it offers a comprehensive analysis by integrating measurable evidence with contextual insights, enhancing the robustness of the findings. However, reliance on secondary data may introduce limitations, such as data comparability and potential bias in qualitative interpretation. Despite these limitations, the approach provides a balanced perspective on the interplay

between economics and nutrition.

RESULTS AND DISCUSSION

Proportion of Income Spent on Food

Various scholars have scrutinized the inverse relationship between the proportion of income spent on food and the level of development. This stems from the higher disposable incomes that engender a higher demand for luxuries and move beyond the essentials like food. This phenomenon is based on the economic concept derived by Ernst Engel, a German statistician, called 'Engel's Law'¹, which states that the percentage of income allocated for food purchases decreases as a household's income rises, while the percentage spent on other things (such as education and recreation) increases.

This study uses the data from three different categories of development levels of countries given by the United Nations as *developed*, *developing*, and *least developed*². For the purpose of this study, the following countries were chosen to represent the 3 categories:

Developed	The United States of America
Developing	India
Least Developed	Myanmar

Integrating these three classifications, this paper will attempt to prove the already understood consensus of the relationship between the proportion of income spent on food and the level of development. It will examine the **proportion of household income** spent on food and the **macronutrient composition** of diets in developed, developing, and underdeveloped countries. This research will go beyond this concept and discover the macronutrient composition of the food discussed. It will explore the implications of nutritional level and test whether, while a country thrives economically and becomes richer with a higher disposable income, it improves the quality of life.

Descriptive Statistics

In 2022, the total consumer expenditure in the United States (developed) was \$50,289, of which consumers spent only 6.7% on food. In contrast, in India (developing) the total consumer expenditure was \$1,553, from which consumers spent 32.0%. The total consumer expenditure in Myanmar (underdeveloped) in 2022 was \$592 from which consumers spent a staggering 56.4% on food. The data supports Engel's Curve Theory which describes how household expenditure on a particular good or service varies with household income.

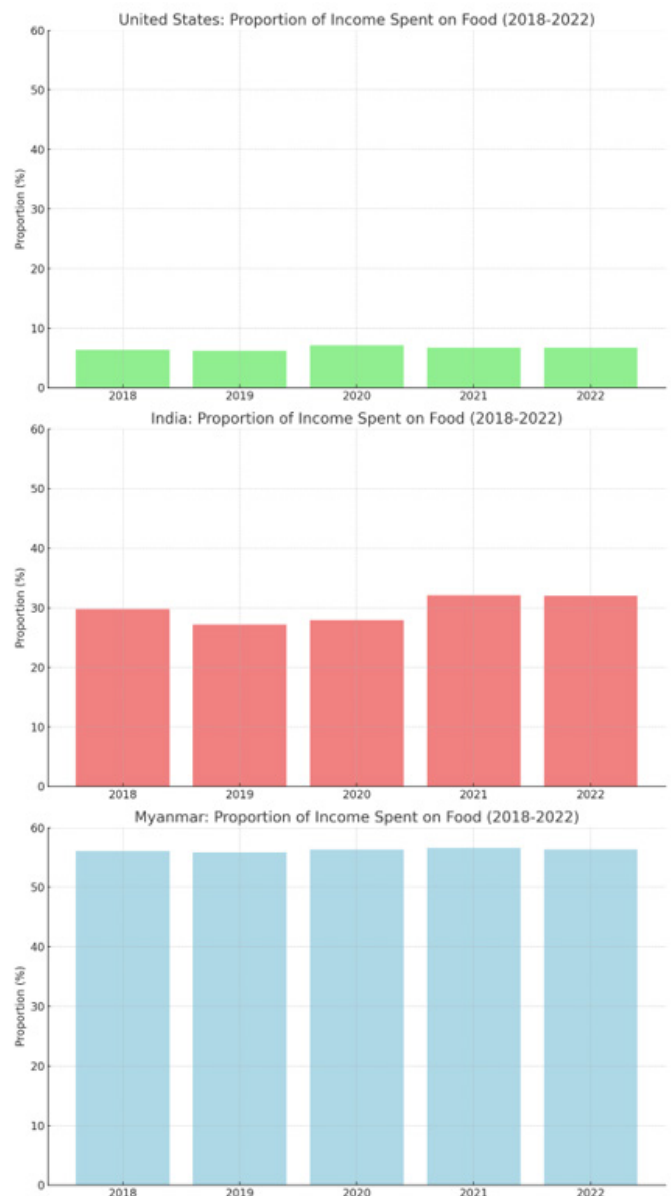


Figure 1: Proportion of Income spent on Food for 5 years

Further evaluating this data for 5 years, the United States' proportion of income spent on food was 6.4% in 2018, 6.2% in 2019, 7.1% in 2020, 6.7% in 2021, and 6.7% in 2022. The mean proportion of income spent on food is 6.62%, with a standard deviation of 0.34%. The extremely low variability shown by the standard deviation indicates a stable economic environment where the cost of food relative to income is consistent. This supports the characteristic of a developed economy where higher and more predictable incomes result in a relatively small and consistent proportion of income being spent on food.

India's proportion of income spent on food was 29.8% in 2018, 27.2% in 2019, 27.9% in 2020, 32.1% in 2021, and 32.0% in 2022. The mean proportion of income spent on food is 29.8%, with a standard deviation of 2.26%. The moderate variability suggests that there are fluctuations in the economy and emphasizes the characteristics of developing countries where economic stability and access to resources can be inconsistent.

Similarly, Myanmar's proportion of income spent on food in 2018 was 56.1%, 55.9% in 2019, 56.3% in 2020, 56.6% in 2021, and 56.4% in 2022. The mean for this set of data is 56.26% with a standard deviation of 0.27%, indicating very low variability. The data shows a consistent economic condition where a large proportion of income is regularly required for food.

This study's conclusions are relevant not only to the three countries that were analyzed but also to economies at various stages of growth. Engel's Law is universal, showing an inverse relationship between income levels and the share of income spent on sustenance. In developed countries with higher disposable incomes, such as the United States, food spending maintains a small and consistent proportion of total income, suggesting economic stability. In contrast, emerging and resource-burdened nations such as India and Myanmar dedicate a considerable amount of their income to food, signaling economic unpredictability and resource restrictions. These trends highlight the wider economic premise that when nations advance economically, their spending patterns change from needed commodities to luxuries, influencing dietary choices.

Macronutrient Composition

The macronutrient composition of a diet is the combination of key food groups such as carbohydrates, proteins, fats, and fiber. This composition sheds light on the nutrition level of average diets in countries like the United States, India, and Myanmar. It is already established that the United States spends the least proportion of income on food and Myanmar, spends the most, but whether it affects the quality of life is the real question. Countries may be the most developed, but consume fatty foods, leading to a weaker standard of living.

Dietary reference intakes suggest that adults consume 45% to 65% of their total calories from carbohydrates, 20% to 35% from fat, and 10% to 35% from protein³.

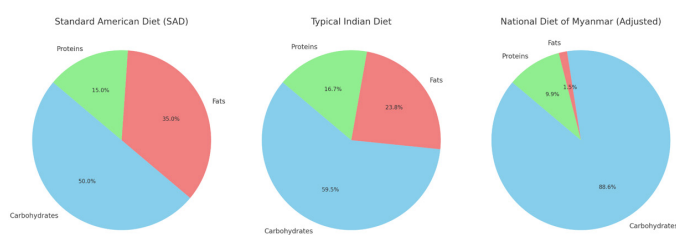


Figure 2: The macronutrient composition of diets in America, India and Myanmar

Despite economic affluence, the typical American diet, known as the Standard American Diet (SAD), is composed of around 50% carbs, 35% fats, and 15% protein⁴. This macronutrient distribution and excessive intake of processed and fast meals have resulted in significant health problems. The accessibility and availability of high-calorie, low-nutrient meals contribute considerably to obesity, a global epidemic.

The typical Indian diet is carbohydrate-heavy, primarily sourced from cereals such as rice and wheat. The average daily intake includes 1943 kcal with a macronutrient composition of 59.5% carbohydrates, 23.8% fats, and 16.7% proteins.⁵

The overall national diet of Myanmar is heavily carbohydrate-based, predominantly sourced from cereals, especially rice. The average daily intake includes 1,572 Kcal, with a macronutrient composition of approximately 88.6% carbohydrates, 11.4% proteins⁶, and varying proportions of fats between urban and rural populations. Data on macronutrient consumption indicates that a reduction in the consumption of carbohydrates was accompanied by increases in protein and fat consumption, as indicated by the declining share of carbohydrates at higher income quintiles. When comparing the Myanmar diet to WHO (World Health Organization) international standards⁷ for a balanced diet in terms of macronutrient contribution of energy, the Myanmar diet fell within recommended ranges for all macronutrients, which may indicate that food insecurity in Myanmar is not a function of dietary imbalance, but rather overall volume.

CONCLUSION

The data in this average macronutrient composition highlights a paradox between food consumption in less developed nations such as Myanmar and India and food consumption in developed countries like the United States. Despite spending a considerable percentage of their income on food, these countries maintain a balanced nutritional profile, conforming to international carbohydrate, protein, and fat intake guidelines. This contrasts with the scenario in economically flourishing nations such as the United States, where reduced relative food spending and the easy availability of fast food have led to a diet high in fats and processed foods, resulting in widespread obesity and related health problems. As a result, while developing countries suffer economic issues, their food patterns, perhaps, may sustain a higher standard of life in terms of nutrition than the United States. This indicates that economic success may not always translate to better nutritional health. This clarifies that food insecurity in Myanmar and India is more related to the volume of food rather than dietary imbalance.

FOOTNOTES

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